BOOK REVIEW

The Pest War. W. W. Fletcher, Halsted Press, John Wiley & Sons, N. Y. 218p., 1974. $11.95.

The problems associated with control of insects and other pests are complex. The author discusses man's war against the major pests that threaten human health and the supply of food. The book is primarily dealing with insects, weeds, fungi and certain vertebrates. Methods of pest control, from mechanical ones, crop rotation, quarantine and eradication, to biological and chemical methods are outlined. The development of insecticides from its early days, through the dramatic period following the application of DDT, cyclodienes, carbamates, organophosphorus and systemic insecticides, the resistance to these compounds, the synergistic effects, as well as diverse uses of herbicides are discussed in brief. I was intrigued by the description of the discovery of 2,4 D in this book, since it differed strikingly from the story I knew. According to Fletcher, 3 scientists at Rothamsted Experimental Station, Nutman, Thorton and Quastel hit upon 2,4 D, and the result of their preliminary work was communicated in 1942 to the Agricultural Research Council, who asked Prof. G. E. Blackman of Oxford University to initiate a program of field trials. These results appeared as late as 1945 in NATURE, having been held up until then for security reasons. The author then mentions that in 1942 two Americans, Zimmerman and Hitchcock, described the use of 2,4 D as a plant growth regulator, but not as a herbicide. Also in the United States, Marth and Mitchell, as well as Hamner and Tukey described the herbicidal uses in 1944. It might be difficult to establish precedence for the precise discovery of the herbicidal activity from these quotations, but I recall that the patent was applied for, and given, to Zimmerman and Hitchcock at Boyce Thompson Institute. It was not contested by the workers at Rothamsted, and the American scientists deserve full credit for this discovery. The various fungicides, including thiram, captan, quinones, as well as antibiotics such as streptomycin and griseofulvin are briefly mentioned. A whole chapter is devoted to methods of application of insecticides and herbicides.

Among the vertebrate pests, the rabbit eradication attempts in Australia and Europe by the myxomatosis virus are described. The resistance to the virus forced the reintroduction of effective chemical control methods. While rabbits seem to be regarded with some affection, rats are generally despised and the most drastic eradication methods are sometimes proposed, and used. Among them is the application of anticoagulant agents, to which, unfortunately, rats can develop resistance. Several species of birds, such as pigeons, gulls, and others also are listed as pests, and their control discussed. The impressive success of biological control methods, as well as integrated biological and chemical control, and novel methods of control are presented in a very stimulating manner. Sterilization by chemicals and radiation, pioneered by Knipling, use of sex attractants, repellents, electromagnetic energy, ionizing radiation, as well as the use of insect hormones as insecticides are all briefly presented. A whole chapter is devoted to the effects of pesticides on the environment. The book ends with an appendix, listing additional sources of information for interested readers, as well as a list of common and scientific names of pests, and of pesticides. A good index, on 18 pages, is provided.

The author should be congratulated for his comprehensive and well balanced presentation of this complex subject, in a manner understandable by laymen as well as by experts.

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